

WHAT IS CLAIMED IS:

1. A detergent composition comprising:
 - (A) a detergents surfactant system;
 - (B) a polyelectrolyte complex of cationic and anionic polymers comprising:
 - (a) cationic condensates of (i) at least one amine selected from the group consisting of linear alkylamines, branched alkylamines, cycloalkylamines, alkoxyamines, amino alcohols, cyclic amines containing at least one nitrogen atom in a ring structure, alkylenediamines, polyetherdiamines, polyalkylenepolyamines, mixtures of one of the said amines with at least one amino acid or a salt thereof, reaction products of the said amines with at least one anionic group containing alkylating agent wherein per mole of NH group of the amines of from 0.04 to 0.6 moles of the anionic group containing alkylating agent is reacted, and mixtures thereof, and (ii) a crosslinking agent selected from the group consisting of epihalo-hydrins, bishalohydrins of diols, bishalohydrins of polyalkylene glycols, bishalohydrins of polytetrahydrofurans, alkylene dihalides, alkylene trihalides, bisepoxides, trisepoxides, tetraepoxides, mixtures thereof, and quaternized cationic condensates of (i) and (ii) and;
 - (b) a polymeric anion source with at least 3 anionic groups and a total net charge of at least 4 negative charges;

wherein the charge ratio between anionic and cationic polymers is from 0.01 to 20;

and

 - (C) the balance detergent adjunct ingredients.
2. A detergent composition according to Claim 1, wherein said polymeric anion source is selected from the group consisting of polyvinyl sulfonate, copolymers of polyvinyl sulfonate, polystyrene sulfonate, copolymers of polystyrene sulfonate, polyacrylate, copolymers of polyacrylate, polymaleate, copolymers of polymaleate, polymethacrylate, copolymers of polymethacrylate, polymethyl-methacrylate, copolymers of polymethyl-methacrylate, polyaspartate, copolymers of polyaspartate, and mixtures thereof.

3. A detergent composition according to Claim 1 wherein the polyelectrolyte complex comprises, as cationic component (a), polycationic condensation products obtainable by condensation of

- (i) piperazine, 1-alkylpiperazines having 1 to 25 carbon atoms in the alkyl group, 1,4-dialkylpiperazines having 1 to 25 carbon atoms in the alkyl groups, 1,4-bis(3-aminopropyl)piperazine, 1-(2-aminoethyl)piperazine, 1-(2-hydroxyalkyl)piperazines having 2 to 25 carbon atoms in the alkyl group, imidazole, C₁- to C₂₅-C-alkylimidazoles, aminoalcohols, linear, branched or cyclic alkylamines, other alkylene diamines, polyetherdiamines, polyalkylene polyamines, or mixtures of said compounds with
- (ii) epichlorohydrin, bishalohydrins of C₂- to C₈-diols, bisglycidyl ethers of C₂- to C₁₈-diols, bisglycidyl ethers of polyalkylene glycols, bisepoxybutane and/or alkylene dihalides

in a molar ratio of from 2 : 1 to 1 : 1.5, wherein the condensation products are optionally, quaternized.

4. A detergent composition according to claim 1 wherein the polyelectrolyte complex comprises, as cationic component (a), polycationic condensation products obtainable by condensation of

- (i) piperazine, 1-(2-hydroxyethyl)piperazine, 1-(2-aminoethyl)piperazine, imidazole, C₁- to C₃-C-alkylimidazoles, and mixtures thereof with
- (ii) 1,2-dichloroethane, 1,2-dichloropropane, 1,3-dichloropropane, 1,4-dichlorobutane, epichlorohydrin, bischlorohydrin ethers of diols, bischlorohydrin ethers of polyalkylene glycols, bischlorohydrin ethers of polytetrahydrofurans, bisepoxybutane, and mixtures thereof, and
- (iii) quaternization of the condensation products using alkyl halides, epoxides, chloroacetic acid, 2-chloroethanesulfonic acid,

chloropropionic acid, epoxysuccinic acid, propane sulfone, 3-chloro-2-hydroxypropanesulfonic acid, dimethyl sulfate and/or diethyl sulfate, or oxidation of the tertiary nitrogen atoms of the condensation products to N-oxides.

5. A detergent composition comprising:

from about 1% to about 80% by weight of surfactants selected from the group consisting of nonionic, anionic, cationic, amphoteric zwitterionic surfactants and mixtures thereof; and a polyelectrolyte complex of cationic and anionic polymers which consists of

- (a) cationic condensates of (i) at least one amine selected from the group consisting of linear alkylamines, branched alkylamines, cycloalkylamines, alkoxyamines, amino alcohols, cyclic amines containing at least one nitrogen atom in a ring structure, alkylenediamines, polyetherdiamines, polyalkylenepolyamines, mixtures of one of the said amines with at least one amino acid or a salt thereof, reaction products of the said amines with at least one anionic group containing alkylating agent wherein per mole of NH group of the amines of from 0.04 to 0.6 moles of the anionic group containing alkylating agent is reacted, and mixtures thereof, and (ii) a crosslinking agent from the group consisting of epihalohydrins, bishalohydrins of diols, bishalohydrins of polyalkylene glycols, bishalohydrins of polytetrahydrofurans, alkylene dihalides, alkylene trihalides, bisepoxides, trisepoxides, tetraepoxides, mixtures thereof, and quaternized cationic condensates of (i) and (ii) and;
- (b) a polymeric anion source with at least 3 anionic groups and a total net charge of at least 4 negative charges;

wherein the charge ratio between anionic and cationic polymers is from 0.01 to 20.

6. A detergent composition according to claim 1 wherein the polyelectrolyte complex comprises, as cationic component (a), polycationic condensation products obtainable by condensation of

(i) piperazine, imidazole or mixtures thereof with (ii) epichlorohydrin, where the condensation products have molecular weights Mw of from 500 to 1 million and have a charge density of from 0.1 to 8 mequiv/g.

7. A detergent composition according to claim 1 wherein at least 80% of the NH groups of the cationic component (a) are in quaternized form or as N-oxides.
8. A detergent composition according to claim 1 wherein the polycationic condensation products have a molecular weight Mw of from 1000 to 100,000.
9. A detergent composition according to Claim 2, wherein the composition further comprises a deteritive enzyme and preferably comprises an enzyme stabilization system.
10. A detergent composition according to Claim 3, wherein the composition further comprises a deteritive enzyme and preferably comprises an enzyme stabilization system.
11. A detergent composition according to Claim 4, wherein the composition further comprises a deteritive enzyme and preferably comprises an enzyme stabilization system.
12. A detergent composition of according Claim 2, wherein the composition further comprises an inorganic peroxygen bleaching compound, which is preferably selected from the group consisting of alkali metal salts of perborate, percarbonate and mixtures thereof, and a bleach activator, which is preferably nonanoyloxybenzene sulfonate.
13. A detergent composition of according Claim 3, wherein the composition further comprises an inorganic peroxygen bleaching compound, which is preferably selected from the group consisting of alkali metal salts of perborate, percarbonate and mixtures thereof, and a bleach activator, which is preferably nonanoyloxybenzene sulfonate.
14. A detergent composition of according Claim 4, wherein the composition further comprises an inorganic peroxygen bleaching compound, which is preferably selected from the group consisting of alkali metal salts of perborate, percarbonate and mixtures thereof, and a bleach activator, which is preferably nonanoyloxybenzene sulfonate.

15. A detergent composition of according Claim 2, wherein the composition further comprises a cellulase enzyme.
16. A detergent composition of according Claim 3, wherein the composition further comprises a cellulase enzyme.
17. A detergent composition of according Claim 4, wherein the composition further comprises a cellulase enzyme.
18. A laundry additive composition comprising:
 - a) from about 1% to about 80% by weight of water; and
 - b) a polyelectrolyte complex of cationic and anionic polymers comprising:
 - (i) cationic condensates of (ii) at least one amine and (iii) a crosslinking agent from the group consisting of epihalohydrins, bishalohydrins of diols, bishalohydrins of polyalkylene glycols, bishalohydrins of polytetrahydrofurans, alkylene dihalides, alkylene trihalides, bisepoxides, trisepoxides, tetraepoxides, mixtures thereof, and quaternized cationic condensates of (ii) and (iii) and;
 - c) a polymeric anion source with at least 3 anionic groups and a total net charge of at least 4 negative charges;wherein the charge ratio between anionic and cationic polymers is from 0.01 to 20.
19. The laundry additive composition of Claim 18, wherein the composition further comprises a pH adjuster and one or more fabric softening components.
20. The laundry additive composition of Claim 18, wherein the composition further comprises a cellulase enzyme.
21. A process for producing a detergent composition having a fabric appearance component comprising a polyelectrolyte complex of cationic and anionic polymers comprising the steps of:

- a) providing an anionic polymer with at least 3 anionic groups and a total net charge of at least 4 negative charges;
 - b) providing a cyclic amine cationic polymer;
 - c) combining said anionic polymer with said cationic polymer to form a mixture;
 - d) stirring said mixture until completely homogeneous to produce a polymeric ion pair; and
 - e) adding said polymeric ion pair to a detergent composition to form a detergent composition having a fabric appearance component.
22. The process of Claim 21 wherein said anionic polymer with at least 3 anionic groups and a total net charge of at least 4 negative charges is selected from the group consisting of polyvinyl sulfonate, copolymers of polyvinyl sulfonate, polystyrene sulfonate, copolymers of polystyrene sulfonate, polyacrylate, copolymers of polyacrylate, polymaleate, copolymers of polymaleate, polymethacrylate, copolymers of polymethacrylate, polymethyl-methacrylate, copolymers of polymethyl-methacrylate, polyaspartate, copolymers of polyaspartate, and mixtures thereof.
23. The product of the process of Claim 21.
24. The process of Claim 21 further comprising the step of agglomerating or spray-drying the polymeric ion pair.